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Wed April 10, 1963

Phaselver Linear Measuring Engine (Potential Proposal)

[redacted]

Draft of proposal received here Apr. 3, 1963

Proposal is in two phases:

1. Demonstration of feasibility of applying phaselver to linear measurements

2. Demonstrate feasibility of using phaselver to measure to 1 micron over 9 inches with a least count resolution of ¼ micron.

These people appear to be highly capable and have an extensive background in precision measuring. Their work has been concentrated on angular measurement but it seems to be applicable to linear measurement. There is every reason to expect success in the feasibility demonstrations.

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In my opinion, this work is urgently required in the program to upgrade measuring capability. The approach has several attractive advantages:

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1. No lead screw is required thus traversing time is not limited by lead screw speed.

2. Each position is unambiguous so traversing speed is not limited by counting rate.

3. The basic electronic techniques have already been worked out so their is a high assurance of success.

The only possible weakness is in the accuracy required to make the master pattern. This can only be evaluated in a feasibility demonstration.

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[redacted] plans to deliver the proposal Fri. 12 Apr.

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